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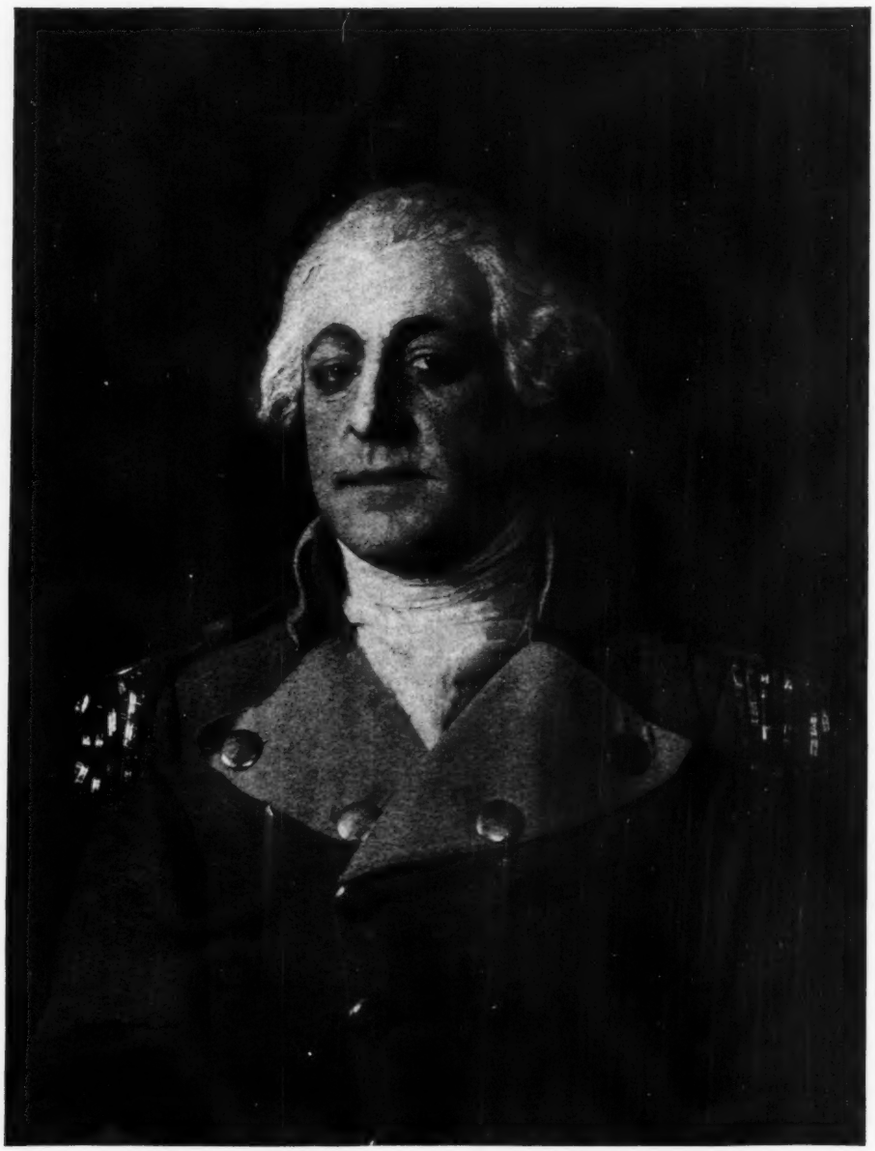

A REVOLUTIONARY PATRIOT
BY CLARISSA HOVEY

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The American Journal of Photography

VOLUME XIII JULY, 1904 NUMBER 1

Shutters

HARRY L. SHEPHERD, B. SC.

IS it all in the lens? It certainly is not. A great deal is in the shutter. Shutters are abused, overworked, and generally misused by many, many amateurs, and the result is poor work, — often absolute failure. A lens may be the best and the shutter the best that money can buy; but if they are not used intelligently, good results cannot be expected. From the shutter on the dollar kodak to that on the two hundred dollar camera ninety per cent of the poor results are due to ignorance of what the shutter will do. Take, for instance, a five dollar kodak. The lens is an achromatic meniscus with a fixed focus of five inches, working at f. 16, and the shutter of the rotary design giving instantaneous and time exposures. The fastest speed is approximately 1-25 of a second. Now right here don't start and kick about the lens. The lens is all right for many purposes and is the one used by thousands of "button pressers" to take everything in sight. The lens works at f. 16, the shutter at 1-25 second. That speed is often expected to do snap-shot work from open landscapes to portraits, at any hour of the day and at any time of the year.

I think it hardly necessary for me to explain that open landscapes, average landscapes, buildings, street scenes, portraits (or perhaps I had better say groups), all require different exposures at different hours of the day, depending not only on the strength of the light, but also on the time of year. As an example, at nine A.M. in September an average landscape, flooded with sunshine, requires at f. 16, 1-10 second; and at one P.M. the same view requires only about 1-20 of a second. In December the exposures of the same view at nine A.M. and one P.M. would be 1-5 and 1-10 second. These exposures are of course only approximate, and are necessarily, on such an open question as exposure, subject to criticism. The exposures are calculated for plates of medium rapidity.

One is evidently attempting almost the impossible in such cases, by working the shutter five times too fast. Again, in street views: at ten A.M. in March one wishes to take a street view, part of the view being in shadow. The exposure at f. 16 would be 1-3 second. Thousands of films are wasted every day by underexposure from too slow a shutter. Of course sometimes one gets something, but in most cases the results are very poor. The only way to do with such a shutter is always to have your subject in full sunlight and between the months of September and May to expose only between the hours of ten A.M. and two P.M., when the light is strongest.

A better way is to buy a better kodak, such as a Bull's-Eye Special, No. 2, which has

a lens working at f. 8 (an opening four times the area of f. 16) and a shutter in which the snap-shot speed can be extended to about 1-10 of a second.

Now just to touch on a lens example. If stop f. 16 requires on some subject or other an exposure of 1-10 second, then stop f. 8 would require only one quarter as much, or 1-40 second, because it allows four times as much light to pass, its area being four times the area of stop f. 16. Those who are not familiar with the stop or diaphragm question can find it fully explained in any book treating on the lens question.

One cannot make an exposure of 1-10 second by holding a camera in the hands, because it is impossible to hold it immovable; but it can be done by holding it firmly pressed to the body, but not in close proximity to the heart, especially if excited. I find a good plan is to press the camera firmly against the right side with the right hand and arm, and steady and direct it with the left. In this way one "shoots" across the body and does not need to face the subject, which is a very desirable feature in street scenes, in order not to attract attention. An exposure of 1-10 second will catch many street views, including fairly rapidly moving objects if they are not too close to the camera, and are caught at an angle. Of course if the light will allow of shorter exposure, it is well to take advantage of it. I have called attention to these points to show in the first place wherein many fail, and in the second place that a cheap lens cannot be used with a lightning-speed shutter, and also that it is not necessary nor advisable in most cases to do so.

Fixed-focus cameras have just as much right to be fitted with good shutters having variations of speed from 1-100 to 1 second, also bulb and time exposures, as focusing cameras. Automatic shutters having instantaneous, bulb, and time exposures are all right when the cameras can be used with a tripod, as the bulb is the most satisfactory of the three unless the lens works at f. 8 at least.

In shutters having variable speeds, as the Eastman triple action, the Victor, the Unicum, the Iris diaphragm, the B. & L. automatic, the Volute, and others, it is well to have the speeds marked on the shutter verified in some way. Not one of the shutters mentioned, except the Volute, will give a maximum speed of 1-100 second. The 1-100 usually falls to 1-50, often to 1-25. I give one example of a good commercial shutter:—

Marked speeds	$\frac{1}{100}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{8}$	$\frac{1}{2}$	1
Actual	$\frac{1}{50}$	$\frac{1}{50}$	$\frac{1}{10}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{3}$

It is mechanically impossible to have the actual speeds tally with those marked. Temperature, weather conditions, etc., affect the working parts to a marked degree, so we have to be satisfied with approximate values; and as long as we know approximately what the indicated speeds really are, that is all that is necessary. We are not compelled to stick to exact exposures. That is taken care of in the developer if the exposure has been approximately correct. If it were otherwise, most of us would go insane on the subject of exposure. When one has tested the speeds of one shutter, it is possible for most purposes to tell the exposures of any other by comparing the "clicks" at the different speeds from 1-25 second down.

The focal-plane shutter is coming more and more to the front, and I believe that in a few years it will be fitted to most cameras using R. R. lenses working at f. 8, the shutter speeds varying from 1-200 to say 1-10, and the price will place such cameras in reach of many amateurs who can appreciate a good thing.

Instantaneous Photography

MATTHIAS STRATTON

ULTRA-RAPID instantaneous photography is not only marvelous, but is as fascinating as it is difficult. It represents a thoroughly modern class of photographic art, particularly utilized at this time in journalistic work. The worker must possess a keen observation in order that he may judge the actinic quality of the light and the speed of the animated object so rapidly approaching, arrange the necessary adjustment of the shutter, and arrest motion. He must do all this at the proper instant, for the entire operation must be accomplished almost within the space of thought.

This class of work requires a camera equipped with a focal-plane shutter and a lens of great light-transmitting power with a working aperture of not less than f. 6.8 and possessing perfect definition over an extended field. No set rules can be laid down for very rapid exposures, for experience must be one's guide. For the enlightenment of those who may desire to enter this exceedingly interesting field of photographic work, the following information is furnished. The focal-plane shutter is a curtain blind that operates directly over the plate. It is an English invention, and was patented by Messrs. Thornton and Pickard about 1880. The curtain blind has an adjustable slit in the center and must be wound up previous to each exposure. In order to focus when attached to a view camera, the blind is first brought to top of plate, and by means of a screw provided for the purpose, the slit is opened to the full width of ground glass. After the desired focus is obtained the blind is wound back and the aperture of the slit is adjusted by means of a series of letters arranged on a dial on the side of shutter. With this arrangement a speed of from one second to 1-1000 second is possible.

This class of shutter is used with certain makes of photographic apparatus which are furnished with a mirror which throws the image on a ground glass in the top of the camera. The operator is thus enabled to focus up to the instant of exposure and has a great advantage in obtaining pictures of horse-races, athletic events, etc. The regulating of the speed is accomplished by the width of the slit in the curtain shutter and the tension of the spring. For example, if one should use a 1-8 inch slit and the highest tension on the spring, the speed would be 1-1000 second; if a slit of 1-4 inch is used with the same tension, a speed of just one half, or 1-500 second, would be obtained.

In the development of very short exposures lies the greatest interest, for here for the first time one is able to see the strange positions assumed by rapidly moving objects; and while one may be fairly sure that the subjects are properly placed upon the plate, one never can know in advance what forms in action the figures have taken. Great care must be used in handling exposures made with these wonder-working machines. If the plates are placed in a normal developer at first, the contrast will be too strong and all detail in shadows will be lost. A dilute developer should be used until the detail is out and then development should be finished in a solution strong in reducing agent. Pyro is the best agent for this work, and from a twenty minutes to three quarters of an hour is often necessary to secure a negative of good printing quality.

Working up a Picture

C. H. CLAUDY

SO many people have written and talked and debated and fought about the question of "faking," that I have preferred to name the process here as per my title. "Faking" carries with it an atmosphere of deceit, a suggestion of the illegitimate, and a general not-to-be-mentioned-in-polite-society air which is disagreeable to those who employ the process in what seems to them a legitimate way. So finely drawn is the line between so-called "allowable" retouching and "faking" by those whose photographic god is technique, and so many have been the writers who have attempted to say what is and what is not "faking" in a picture, that it would be presumptuous, indeed, for me to try to settle the question. So I will proceed with the assumption that all my readers have their own ideas as to what constitutes "faking" and the hope that most of these ideas are in accordance with the generally accepted meaning of the term, which is either a retouching of the print which is more than spotting, or a working into the negative objects and detail which are not there naturally.

Diffident though I may be in regard to expressing myself on what is and what is not "faking," I am strong with the strength of conviction in answer to the question, "Is it permissible?" Unconditionally and roundly do I answer, "Yes!" It is a maxim in art that "The means are nothing, the end is everything." It is true that art schools teach a technique which is rigidly circumscribed within conventional rules. Nevertheless, had it not been for the unconventionality of many great artists who borrowed from pastel to apply to oil, who evolved etching and dry-point from pencil and pen and ink, who painted with their thumb-nails and ends of match sticks, the graphic arts of to-day would be far behind their present position of advancement.

What is good enough for oil and water-color, arts which have the dignity of age and many masters, is certainly good enough for photography when applied to the pictorial, — an art still in swaddling-clothes and hardly yet able to toddle by itself.

If a man is struggling to make a picture in monochrome, and uses the camera to get his result, there is no reason, logically supported by any evidence, which can show just cause why he should not assist with pencil or stump the expression of his idea if the camera fail in portraying it in its entirety. It is the *end* which we are to criticise, admire, or condemn and not the *means*. Of course, if our end and aim in photography is to become an expert master of lens and chemical, plate and paper, simply for the pleasure of being able to do with these things all that can be done with them, the question at once takes on another color; but it is color outside the pale of discussion from an artistic standpoint.

It is on this point that the photographic crank and the artist invariably differ. The former expresses great contempt for any effort made with a camera which is not "a straight print from a straight negative." The artist declares as hopelessly impossible nine out of ten of these straight prints, but regards favorably, and even with admiration, a print which has been made through glass or bolting-cloth and which has had the high lights brightened and the shadows deepened by brush-work upon print or negative, or both. With the artist, therefore, I rest my case, believing that as pictorial photography gets its severest criticism and its greatest help from artists, their point of view should be adopted by the worker who

NANCE O'NEIL
BY WILL ARMSTRONG

PHOTO ERA

THE AUTOMOBILE
MADE WITH ZEISS TESSAR

THE ALARM OF FIRE
BY MATTHIAS STRATTON

PHOTO ERA

PINEY BRANCH
BY C H CLAUDY

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has the future of pictorial photography at heart and who desires to see it placed artistically on a par with painting and with drawing.

It is an interesting study in the structure of the human mind to notice that oftentimes when you have brought some stickler for photographic excellence to partially accept your point of view as outlined above, he will allow that retouching upon the *negative* is to be permitted, but snorts disdainfully when you speak of retouching on the print! Why this should be, no one has ever been able to decide. In retouching with the pencil upon the negative, one is only able to increase the strength of high lights and lighten the shadows. Retouching with the pencil or stump upon the print only allows us to increase the shadows and dim the high lights. In what way one is any worse than the other, or any better than the other, a wiser head than mine will have to show. If we are going to retouch or work up our pictures at all, let us be broad-gauged enough to make no invidious distinction between print and negative, transparency or positive, lantern slide or enlargement.

Those of my readers who have been patient enough to follow me through the above generalities, will now be glad to learn that I am about to descend to the concrete.

Very early last year I learned that the Camera Club of Washington, D. C., in which city I live, would hold its annual exhibit in May. As snow scenes in and around Washington are comparatively rare and as I like to have my pictures, when compared with others, stand out, if possible, by their uniqueness, or from some easily remarked difference, I determined, if I could, to secure an unusually good snow scene for this particular salon.

The first requisite, of course, was the snow. The second was a decided knowledge of what particular mood of snow I would attempt to portray. I do not believe (artistically) in going out and taking haphazard pictures and finding out afterwards what they express. The man who writes a story or the painter who paints a picture without a definite idea in view, will never make more of a success than is contained in a happy fluke.

After some deliberation I decided that what I wanted was a picture containing snow which should look cold and wet and clammy, expressing snow as it usually appears in southern latitudes. I wanted to give the impression of murky, miserable weather, which some parts of a Washington winter usually bring.

As snow comes but seldom and stays but a short while in Washington, I knew that the picture I would make must be largely made in the laboratory and the art room. The only available snow-storm this year in which I could go with my camera occurred on a Saturday afternoon. Sunday morning, therefore, I went out in the country to a previously visited spot and got a fair negative. A print from that negative is reproduced herewith. You will notice that the high lights are mostly white paper, although the half-tone reproduction will gray them up a little. The shadows are pretty black and the picture lacks distance. I have not counted, but I think there is material in this negative for at least six different pictures. What I wanted, however, was right in the center. This section of the negative, therefore, was by contact printed on a 4 x 5 transparency plate. The printing was done from the wrong side of the negative. This reversed positive transparency developed, it was carefully worked over with pencil and brush to eliminate all holes, scratches, and uneven places in the gelatine. From this positive a negative was made in the camera, enlarging it to a 5 x 7 size. This negative, while technically as good as could be expected from the original material, was much too black in the shadow and clear glass in the high lights. By the time a print was secured from this negative, which of course was printed reversed again, a

satisfactory amount of diffusion was secured in the tree trunks and branches to give a very fair suggestion of atmosphere.

It now remained for me to see what I could do on the print. The sky, or rather atmosphere, was first worked in by means of a soft stump and crayon. Most of this was subsequently taken out with sponge rubber, but enough was left to give a hazy distance to the picture and the effect of a lowering, cloudy day. A rather light print had been secured in order that no very dense blacks should mar the grayness of the picture, and the deep shadows were, therefore, intensified by the crayon. Finally, a very delicate and judicious use of the stump and eraser upon the snow removed its staring whiteness and gave it the appearance of reality. The result is here presented for inspection.

It has been highly amusing and very instructive, as well as somewhat bewildering, to hear the comments which have been made upon this piece of work. A well-known art critic of this city, who was upon the jury of the Washington Salon, said that the picture was hung without his consent and that he would not have allowed it upon the walls if he could have overcome the opinions of the rest of the jury. Mr. John Hadden, in the June number of *Western Camera Notes*, spoke of it as follows:—

"I have seldom, if ever, seen a better rendition of snow, in addition to which the composition and artistic merit were unsurpassed by anything on the walls."

Many members of the Camera Club of this city complimented me upon my work, while others could not see anything in it but that it had been done by hand and was therefore without the pale.

It necessarily follows from what I have said that I like the picture. It definitely expresses an idea which I formulated before the picture was made, and while by no means entirely satisfactory, it is more nearly so than any work I have done for some time. Whether my readers will like it is a question I am unable, of course, to answer, but I wish to draw attention to the fact that my point lies not as to whether or not this particular composition and print is artistically satisfactory, but whether or not it is artistically an improvement over the un-retouched negative from which it is made.

If it is, I submit that I have proved my argument and that working up a photographic picture is artistically legitimate.

Practical Carbon Work in Two Tones

S. S. LLOYD

THE two pictures accompanying this article, entitled "Pines and Sunshine" and "Evening in Buffalo Harbor," are both reproduced in the exact colors of the originals. I will start from the beginning and explain the actual work required. First comes the paper to make the transfer on. In these I used Whatman's water-color paper. I prepared the background with sizing, giving not less than three coats. The sizing solution is composed of gelatine, one drachm, and water, four ounces. Dissolve the gelatine by putting in a tin on the back of the stove; do not let it boil, as it will froth. Next place five grains of chrome alum in one ounce of water. When entirely dissolved, pour it slowly into the dissolved gelatine, stirring it continually. Lay the paper flat on a table.

Now take a clean, soft bristle brush two or three inches wide, and a small tube of light lemon-yellow water-color. Keep the gelatine warm, to prevent a scum forming on top and bothering you. Place on a piece of paper about a thimbleful of the yellow. Take up a small portion of gelatine with your brush. Rub what gelatine you have taken up in the yellow until all is thoroughly mixed. Now commence to apply this background and sizing at the same time, and, as I have said before, give it not less than three coats. Put the brush in the gelatine with the yellow still on it, stir it around a little, try it on a piece of white paper, and if it is the right shade, go ahead. If not, add a trifle more color or a little chrome yellow (orange). The idea to make "sunshine" is to keep your lemon-yellow light and bright. The three coats can be applied at intervals of half an hour. Draw your brush first up and down the paper, then across several times, to lay the color smoothly. It is very important that this is done or you will have your background full of streaks. The sizing and coloring can be done days or weeks beforehand. I always have a supply of different grades of paper prepared ahead. It keeps indefinitely if kept in a dry place. The color of carbon tissue used in these pictures was "Marine Blue."

The day before you should prepare a solution of one ounce of bichromate of potash in thirty-two ounces of water, adding five grains of carbonate of ammonia. This takes about twenty-four hours to dissolve. This will sensitize fifty or sixty 8 x 10 prints, and I have used it two or three months after preparing and found that it acted just as well as freshly made. Each time before using I filter it through absorbent cotton placed in a glass funnel.

Have your carbon tissue cut beforehand to the size of the picture you are going to make. Sensitize the tissue by immersing for three minutes in a deep tray that has about an inch and an half of the bichromate solution in it. You will find that the tissue is very curly at times, but you must keep it under the solution, rubbing back and front gently with a fine, flat, camel's-hair brush, to prevent little air-bells from forming. A one-inch brush is wide enough. While wet with bichromate solution, the tissue is not sensitive to light; but when dry, it is as rapid as Solio paper. Take a piece of cardboard about twice the size of your print, bend it U shape, tie at the bottom with a string to keep it in that shape. Have this in your dark room, or, as I do, in a closet that is light proof and dry. Take the tissue from the sensitizer when it has been there for three minutes. Lay it over the cardboard to dry, face up. To be in good working order, it wants to dry in six to eight hours. Don't force it. The temperature of the sensitizing bath should never exceed 78 degrees. Dampness is extremely injurious to tissue, both before and after sensitizing. The sensitiveness of tissue increases with age. If the next day after sensitizing you cannot print, place the tissue in a tin tube such as platinum paper comes in, putting the tape on to keep out all moisture, and it will keep for a few days. It works best, however, when made fresh each time.

You are now ready to expose the picture. Place the tissue in the frame, as usual, with any printing-paper, care being taken not to crack the film. It will sometimes be unruly and curl at the edges, but you must overcome this by taking time. Filling the frames can be done in a room with shades drawn to partly keep out the light. To measure the time necessary for your printing, use Solio, and print until detail appears in the high lights of the paper.

Now you want a letter-press; or, if you do not possess one, you may use two pieces of hard wood, say 10 x 12 and one inch thick; about a dozen and a half blotters 10 x 12, to make a springy bed for the pressure that you will require; and four "carriage" thumb-

screw clamps with a six or eight inch opening. You will also need a metal pan, with a bottom larger than 10 x 12 and with a depth of not less than five inches, a quart tin measure, a piece of galvanized iron, about 8 x 10, and a thermometer.

Put enough water in your pan to have it three or more inches deep. Heat it to about 110 degrees. Lay your sized background, face up, on some of the sheets of blotting-paper. In a basin of cold water put just enough warm water to take off the chill. Place the exposed tissue in the water for one minute; in that time it will become very limp and feel like a piece of wet leather. Hold it up by the edges for a few seconds to let some of the surplus water drain off, then place it face down on your sized paper. Place one of the blotters on it, and press down smoothly to absorb as much of the surplus water as possible. Take a piece of paper — wrapping paper is all right, if not too thick, and if free from wrinkles. Rub this down firmly, pressing from corner to corner. The idea is to drive out the water and air that may be between the tissue and the sized paper. If this is not done thoroughly, and air-spaces remain between the layers, the print will not be a success. An air-bell will cause a blister of the film, and unless it is a very small one, it is all up with that print. Remove the paper, and place the balance of the blotters on top of the print, one of the 10 x 12 blocks underneath, the other on top, and one of the iron thumbscrews at each corner. Tighten all evenly, screwing down all as hard as possible to make a good contact between the layers of the print. Let it remain under pressure ten or fifteen minutes. Take the print out of the press, lay it in the pan of water at 90 to 110 degrees, and move it about for a minute or two to remove the air-bells that form on both sides. Then let it lie quietly for five minutes or more, until the pigment oozes out all around the edges. Take hold of the tissue at one corner and lift it up, being careful not to start the film away from the sized paper. If the tissue starts easily, pull it off slowly with an even strain, holding it under water. The warm water dissolves the coating that was on the original backing, and unless the exposure was too much, makes an easy job at this ticklish point. Throw away the backing which you have peeled off. Place the print face up on the 8 x 10 piece of galvanized iron. With one thumb hold the edge of the paper to the iron support, and with the quart measure in the other hand pour some of the water over the print. After a few dips of the measure the high lights will appear. Continue development then by letting the water fall on the shadows, or darker parts of the print. Should the picture not develop as fast as you wish, increase the temperature of the water. If you have over-printed, you will need very hot water; if under-printed, you can make fairly good print with water at 90 to 110 degrees.

Continue development until the print is satisfactory, then hold under running water a minute to clean it and set the gelatine. Dissolve one ounce of powdered alum in a quart of water, and harden the print in this solution for ten minutes. Then wash in running water for half an hour to free it from the alum which remains. Pin up by the edges to dry in any place where you would dry a negative, but do not use heat to hasten the drying.

The formulas and manipulations given in this article are strictly practical, not experiments, and are used by many of the best carbon workers in this country and Europe. Many beautiful effects can be produced by using the different colors of tissue supplied by the makers, or by varying the final support, by using rough or smooth papers, fine-grained canvas, linen, porcelain, glass, or celluloid. The three latter do not require sizing, as the tissue adheres to them readily. Rough papers require more than three coats of sizing. It is better to use more coats and apply thin ones.

SUNSHINE THROUGH THE PINES
BY S S LLOYD

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EVENING IN BUFFALO HARBOR
BY S S LLOYD

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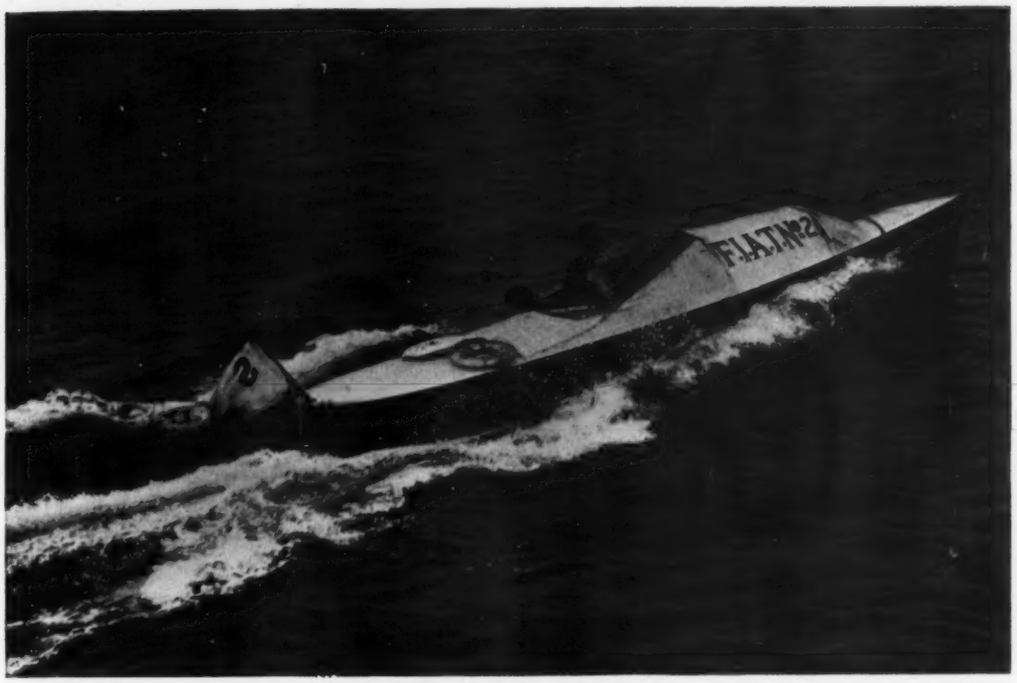

THE AUTO BOAT
BY MARX

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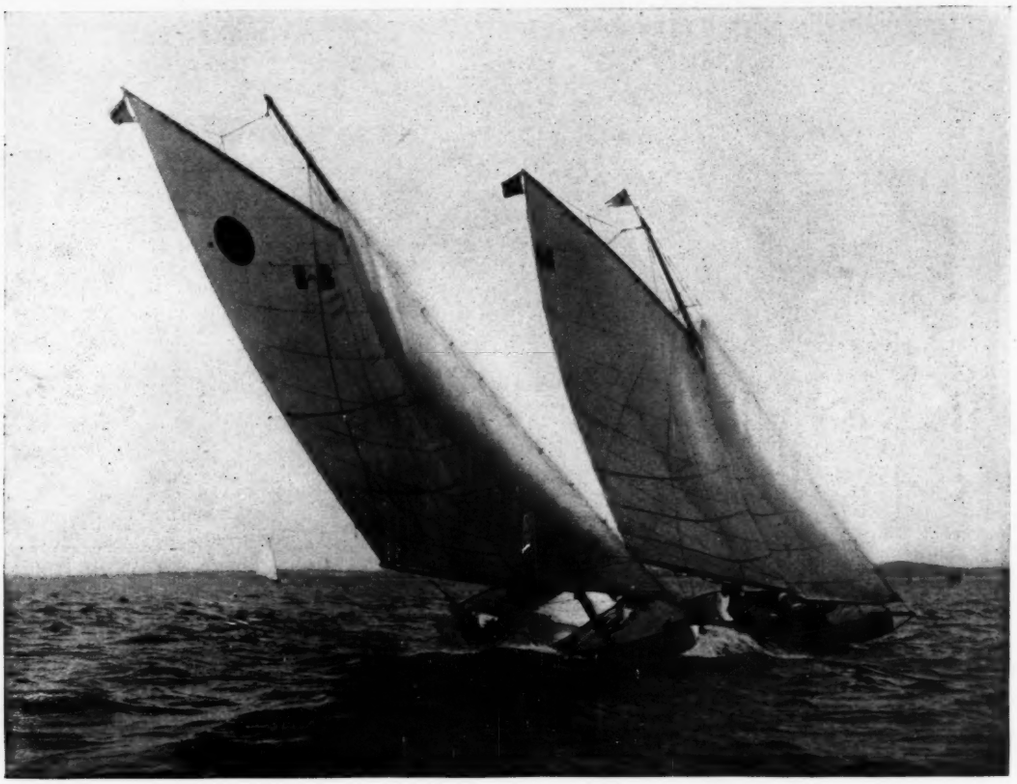

NIP AND TUCK
BY FRANK H. WATERMAN

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Slow Development

E. FORESTIER

THIS subject is not new; many of the technical papers have published long articles on the question of slow development. Generally the authors who recommend the method advise that photographers should adopt it in preference to all others, while other skilful manipulators absolutely refuse to recognize this manner of treating exposed plates.

It is evident that with slow development we are fully committed to automatism, and this condition is not admissible if one refuses to recognize that the development of the latent image is a purely mechanical process.

To condemn all methods except that which is personally preferable, is to be a little too exclusive, for everything finally depends on the end that one proposes to attain. The amateur photographer, who has only a dozen plates to develop from time to time, can make use of processes indicated to him by other amateurs whose productions, of incontestable merit, give their makers sufficient authority so that their advice may not be disdained. But the professional, who has every day, at certain times, to produce from sixty to eighty negatives of all sizes, is obliged to use quicker means, without injuring, however, the quality of the negative, which must always be perfect.

If the amateur experiences a certain pleasure in slowly following the progress of the development of the negative, in not taking his eyes from beginning to end from the mysterious formation of an image, at first invisible, the professional, accustomed to these emotions, sees only an unattractive manipulation; he considers the development of negatives as a labor and not as a distraction. The workman in his laboratory has no time to philosophize upon the physical and chemical phenomena in the presence of which he finds himself. To give an example of the great difficulties which he must overcome, let us take an example which often presents itself. A publisher wishes to reproduce works which are on exhibition; it is necessary to reproduce pictures, works of art, — in wood, metal, copper, wax, — sculpture, architecture, embroideries, etc. The photographer of the publishing house sets forth with his assistants, apparatus of different sizes, lenses of all kinds. Some objects can be taken to the light, others must remain where they are placed, some are under the skylight, others are in glass cases. The required dimensions vary from post-card size to 18 x 22 ; the distance which can be attained from the object is not always enough; the light is often bad. For some subjects it is necessary to use orthochromatic plates with a yellow screen; for others, on account of the placing — never made with a view to photographic operations, naturally — of the objects to be taken, it is the teleobjective or the wide angle which replaces the rectilinear with long or short focus. We pass over many other details to reach more quickly the subject of this article.

Nothing is developed on the spot; the exposures vary from two seconds to three quarters of an hour; the operator judges the time of exposure by intuition; he makes errors, but rarely. The reader takes note that there are complications, and supposes that in variable and approximated conditions of exposure it is possible to end only by treating the plates one after the other, and that it is necessary to give great attention to the developer, the formula of which will be changed as often as the plates to be developed.

The professional, by habit, knowing thoroughly the luminosity of his lenses and the sensitiveness of his plates, exposes to suit his developer, the composition of which is always the same. The infallibility of the workman is a fable; he overexposes and underexposes like the amateur, but evidently with much less exaggeration; and as he knows by experience that it is better to expose too much than not enough, he always makes up his developer with an eye to too long exposures.

In this case the slow developer is indicated and the only suitable one. Until recently it was sufficiently difficult to recommend one developer rather than another, for all had their disadvantages: this gave weak images, and that stained the negative if the plate stayed too long in the solution. To-day we have metoquinone, a perfect developer, and truly new, because it has no equivalent in the series of developers, which is well suited for all combinations, — rapid, moderate, or slow action, — without having any of the disadvantages of the other developers.

The solution consists of the normal developer diluted with five or six parts of water, and may be made as follows: —

Water	6000 ccm	or: —	
Metoquinone . . .	9 g	Water	6000 ccm
Dry sodium sulphite . .	60 g	Metoquinone . . .	9 g
Sodium carbonate . .	10 g	Formosulphite . . .	60 g
Potassium bromide . .	2 g	Potassium bromide . .	2 g

The sodium carbonate of the first formula can be replaced by 30 ccm of acetone.

In either of these solutions the plates develop slowly and produce images which are neither too soft or too hard; they have a remarkable purity and modulation.

A Talk on Trimming Photographic Prints

ALICE PERCIVAL

BEFORE trimming a print one should carefully study the picture composition, as trimming a print enables us to further or carry out the picture concept. And in case that it is less satisfactory than we thought it would be, or if the picture has been hastily taken, careful study of it enables us to so trim the print as to preserve that which is best in the picture.

The need of trimming a print, esthetically speaking, is due to there being "something too much," as it were, in the picture, or a lack of proportion in the dimensions of the print in relation to the picture composition.

The actual dimensions of the print considered in the abstract are of secondary importance; for while certain dimensions are pleasing to the eye, any reasonable dimensions will pass if they encompass a satisfactory picture composition.

In every picture there is a central object of interest, thought, scheme, or theme. This central object, thought, scheme, or theme enables us to determine what is of most value in the picture.

Other elements are valuable in the ratio in which they furnish adequate setting, add to, or embellish the theme.

There should always be a right relation of values, or a right relation of the subject to its setting or to the objects, areas, and spaces presented.

If this has not been attained in the picture composition, thoughtful trimming of the print will assist in securing it.

We remember having been shown a picture of "a mountain." There was a goat in the foreground. It was a good picture of a goat, but the mountain had no setting, — no background or foreground.

In picture composition it is generally conceded that the principal object, or point of interest, should occupy a place at or near the center of the picture. A natural reason for this is that it allows the theme, and consequently our attention, to diminish from the center, instead of centering at the edges and stopping abruptly there. Even art must obey the universal law of center.

Abrupt endings or terminations affect us with a sense of limitation. A termination that is gradual suggests continuity. The ripples on a pool where a pebble has been dropped widen and widen, and though they end at the margin, they give us the impression of going on and on.

Pictures of massive objects in nature and architecture seem to have a more adequate setting if there is a glimpse of sky above them. One reason for this is that the sky suggests illimitation more than any other object.

Curves of themselves give an appearance of continuity, and it is partly due to this fact that they are considered the ideal lines of beauty. In trimming a print care should be taken to preserve them. "Its lines seem continuous, so gently does curve melt into curve."

So the trimming of the print is a part of the making of the picture, with the advantage that you literally "have in hand" that which before was illusive.

For further information on this subject I recommend the reader to see the *Practical Photographer* for April, 1904, on "Trimming, Mounting, and Framing."

This periodical is the best and most complete treatise on trimming and mounting in existence. In plan this periodical is unlike any other treatise or book on the market. Each number treats of a certain definite branch of photography, and tells all that is known on the subject in a series of articles by the best authorities. In this way a fuller and more rounded view of the field is gained than any one point of view could give.

The April number is a comprehensive treatise on "Trimming, Mounting, and Framing," and treats this subject in a broad and logical fashion. The question is of great interest, and this number, as I have just said, is the best practical guide to the solution of these difficult problems that has yet been placed before the public. In especial, the method of multiple mounting on papers is fully considered from both theoretical and practical standpoints, and directions given which will enable the novice to successfully practise this difficult art. It can be ordered from the publishers, the Photo Era Publishing Co., Boston.

CALL OF MODERN TRAGEDY

To Miss Nance O'Neil

"As out of blackness the storm-wrack rifting
Falleth white peace from the moon's face drifting,
So from thy swaying of passions shifting
Out shines thine art for the Soul's up-lifting."

A Disciple of Daguerre

DAVID J. COOK

"The painter is a compound of a poet and a man of science."— HAMERTON.

THE painter endeavors to express, by any means in his power, as true an impression of that which constitutes the pictorial, as he sees it, as possible. The photographer strives for the same end.

Photography stimulates the artistic sense, and cultivates habits of exactness in thought and expression. It is a work of head and hand, and as the quality and quantity expended upon it be much or little, good or bad, so will the result — the finished picture — be artistic or otherwise. The mastery of photography is as much an accomplishment as is the mastery of painting, or the mastery of the piano or other musical instrument.

That photography is a fine art is herein answered, and by the further fact that it is given prominent position in many of our best art publications and treatises on art, and photographs, if you please, are hung in some of the best art galleries, and artist-painters are honored to pass judgment upon them.

"Photographers are developing into the people who are to cultivate the popular taste in art, and are now making it rather difficult for the painter of average ability to pass his daubs off on the public." Such an assertion, coming as it does from one of our foremost American painters, is proof positive, and the best of encouragement, to strive to maintain the present high standing of this most beautiful and fascinating art.

Art is the expression of a thought or of a conception; and whether words or phrases are employed, whether pigments and brush, or camera and sensitive media be used to express the conception of genius, is immaterial. The question whether or not the worker is possessed of the artistic feeling essential to good poetry, painting, or photography is of first consideration. Is he a fine artist? Does his work possess the real sentiment and finish which lives and excites human sympathy? Has he the skill?

Art has its beginning and ending when the worker, so shaping his raw material, meets his ideal standard of beauty; hence, artistic photography, like all other things the outcome of human endeavor, depends upon mechanical skill or technique for excellence of final results; and the photographer can no more afford to neglect or excuse his technique than the poet his meter or choice and arrangement of words; or the painter his drawing or coloring, on the plea that it is artistic because finished in some uncommon process or treated in some unusual way. Such a statement will never make up for loss of likeness or perfect technique. Technical perfection and pictorial photography are synonymous: the one represents a conception and the other its execution or expression. Of the many indispensables that photography is made of, the ability to do (know how) is one of the first. The drawing of the lens challenges the best efforts of the world's greatest draughtsmen; and good, clear, and clean likenesses by photography will ever receive the recognition, support, and appreciation of serious-minded people.

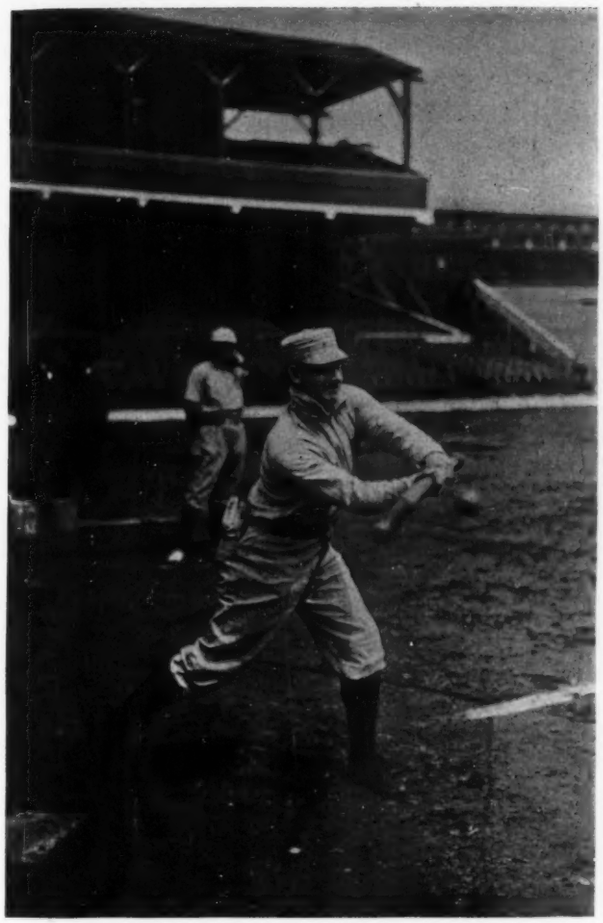
The present-day photographer must come to realize, what is so thoroughly appreciated by the old practitioner, that the ability to produce a work of art requires practise of the science of photography, — a blending of the scientific with the artistic.

RING TOSS
BY HENRY HALL

PHOTO ERA

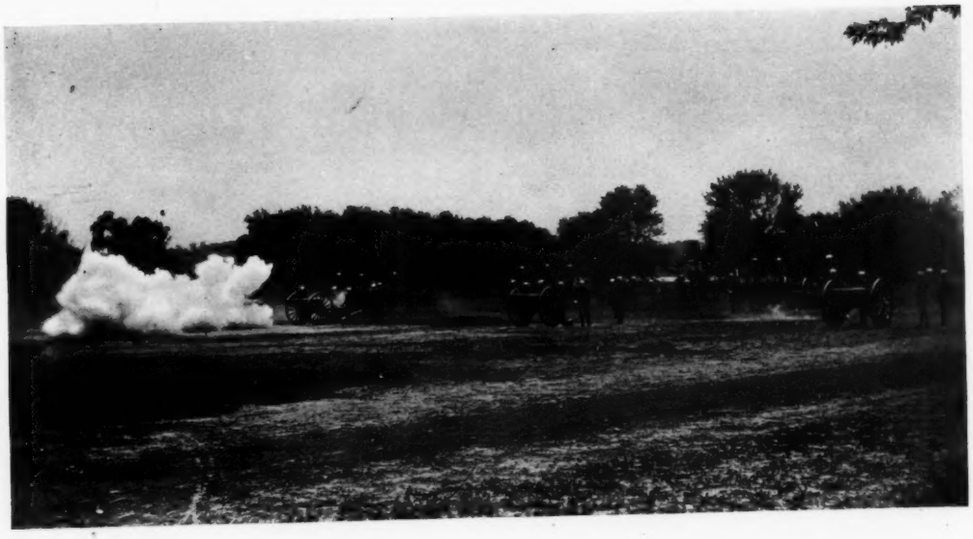
THE RIDING SCHOOL
MADE WITH STEINHEIL ORTHOSTIGMAT

PHOTO ERA



A SAFE HIT
BY MARX

PHOTO ERA

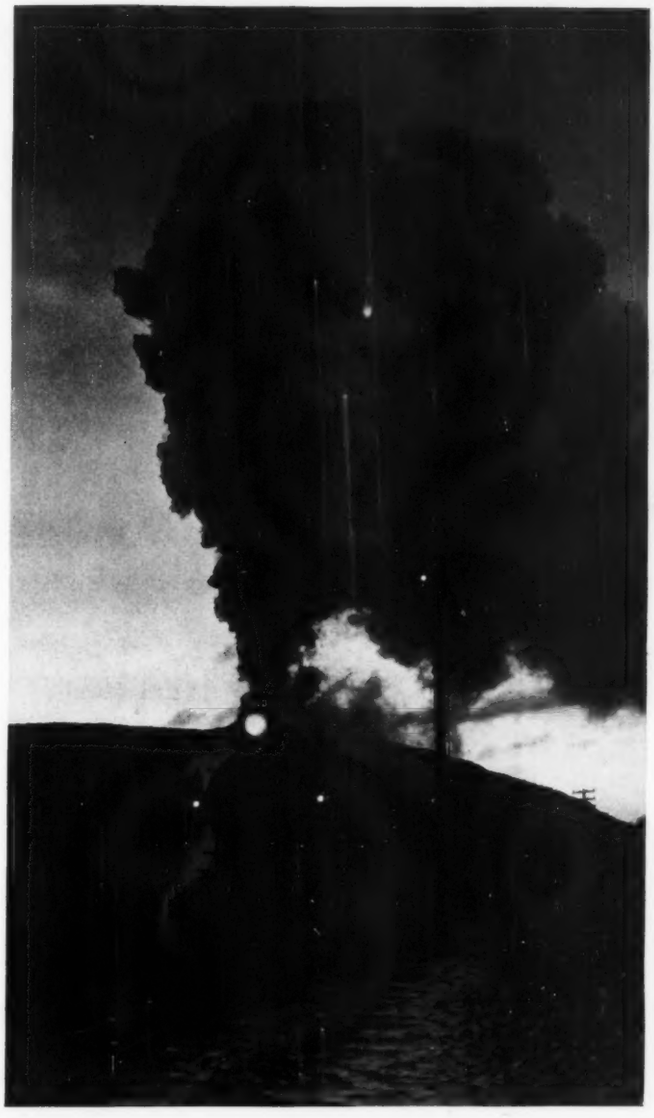


THE FOURTH OF JULY SALUTE
BY G A BRANDT

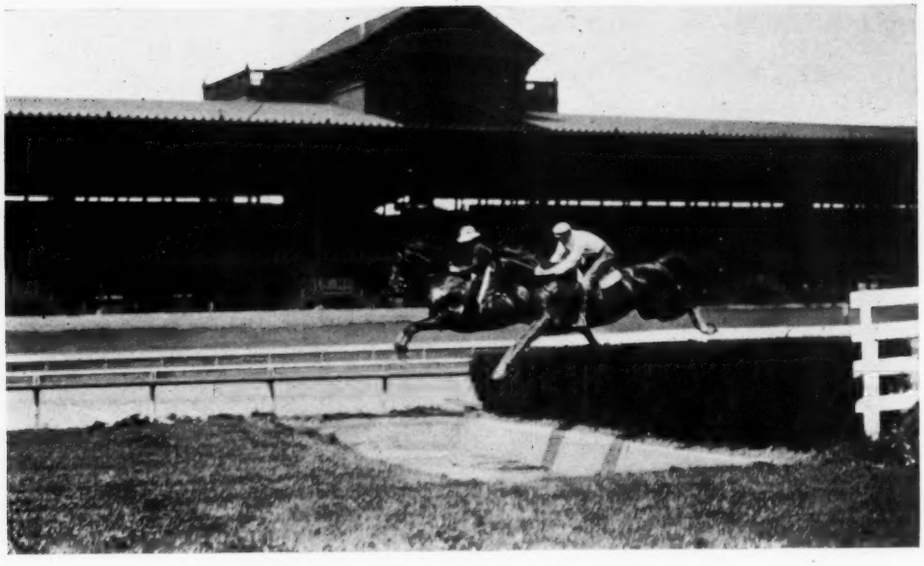
PHOTO ERA

PORTRAIT
BY FERD FLODIN

THE WATER JUMP
MADE WITH RODENSTOCK LUMAR



A NIGHT'S WORK AHEAD
BY FRED JUKES



OVER THE JUMP
BY MARX

PHOTO ERA

PHOTO ERA The American Journal of Photography

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Contributions relating to photography in any and all of its branches will receive our careful consideration. While not accepting responsibility for unsolicited contributions, we will endeavor to return them if not available, provided return postage is enclosed.

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ADVERTISING RATES ON APPLICATION

Vol. XIII JULY, 1904 Number 1

We are happy to announce that our European photographic trip has proved a marked success. The party sailed from New York on schedule time (June 18) on the Red Star liner "Zeeland" for Antwerp. The PHOTO ERA party, with waving flags, cameras, binoculars, and flowers, formed a conspicuous group upon the upper deck of the steamer when it left the pier. It included among the more prominent of the party, Mr. Orson W. Archibald, of Indianapolis; Mr. Frederick H. McClure, of Los Angeles; Mr. William H. Phillips, of Cincinnati; Mr. Isaac Harris, of Boston; Miss Susan H. Wixon, of Fall River; Mr. Frank Roy Fraprie, associate editor of the PHOTO ERA, and others.

The PHOTO ERA itinerary includes a trip through Belgium, France, Switzerland, Italy, the Austrian Tyrol, and Germany. There is also a three weeks' cruise in an ocean steamer to Sicily, Greece, the Ægean, Asia Minor, and Constantinople. As will be seen, this European trip does not follow the beaten path of travel, though it includes the great art centers of the world. The opportunity to see the masterpieces of painting, statuary, and architecture, under expert guidance, with well-known college teachers of art and history, makes this trip a memorable one. The quaint villages and towns of France and Belgium, the incomparable mountain scenery of Switzerland, the picturesque hill towns of Italy, the romantic Tyrol, classic Greece, and the mediæval cities of southern Germany will furnish them with photographs of some of the most inspiring scenes of history and some of the most beautiful and picturesque localities of the world. If the highest function of travel is to broaden individual interests and renew inspiration, then the educational value of this trip will be practically without price for those who are fortunate enough to be able to take it. We hope to give our readers later on the photographic benefits to be derived from it. As the purpose was "to induce American photographers to extend the field of their opportunities," the journey has been planned with special regard for the photographic possibilities contained in such a trip. The study of art and photography under such conditions, with inspiring leaders, specialists, and critics of authority in art, history, music, archæology, and photography, ought to be productive of ideas and freedom of expression in picture-making. We await the result with interest, confident that some definite measure of achievement will be obtained.

It is a singular coincidence that while the English photographic press is discussing widely the question of spirit photographs, a book should appear in the United States incidentally treating of the same subject. Dr. Funk, of the well-known publishing house of Funk and Wagnals, of New York, has issued a book on the general subject of Spiritualism. Among other psychic phenomena treated of in this volume is that of so-called spirit photography.

Lengthy reports on the subject, together with reproductions of some of the results, are given. All appear to have been made in a most curious manner. Several correspondents tell how the spirit faces of departed relatives appeared on the photographic plate while they were sitting to have their own portraits made and without thought of "spirit photography."

Rev. Dr. J. T. Wills, of San Francisco, is one of those who gives his experience with this phenonemon. He purchased the plates, then went to the medium's gallery with them. He had the medium carefully cleanse his hands, and marking the plates so that there could be no substitution he held a plate toward the medium, who placed his hands, one on the top and the other underneath, and while Dr. Wills continued to hold one edge he heard, he said, three distinct raps upon the plate. "Then the medium removed his hands and I put the plate at once into the developer and developed it myself, no one touching it for an instant but myself, neither was it out of my possession for one second from the time that I brought it some four blocks away until I had it fully developed; and to my astonishment there was the face of a lady on it, and that so plain that it has been recognized by my daughter as the likeness of a lady who was never in California and who died in England several years ago."

We are again confirmed in the belief expressed in a recent issue of the PHOTO ERA, that the application of photography to astronomical research has been of priceless value. The latest circulars from Professor Pickering of the Harvard College Observatory announce a list of seventy-six new variable stars in the great nebula of Orion. Photographic negatives of this portion of the heavens were superposed successively upon a glass positive made from one of them. In this way all the variable stars which show striking changes and are comparatively bright were rediscovered and eight new ones found. Six of them are outside of Bond's maps, which was the region covered in the previous investigation. A cursory examination of the vicinity of η Carinæ has been made on six plates by this same method. Ten new variables were found, besides the known variable, U. Carinæ. None of these stars are in the nebula. A similar examination of the small Magellanic cloud resulted in the discovery of fifty-seven new variables, including three in the cluster 47 Tuscanæ which appears on the same plates. All this is the work of Miss Leavitt, one of the assistants at the observatory. An examination of the photographs of the Henry Draper Memorial by Mrs. Fleming has led to the discovery of several new variable stars in the constellations of Auriga, Ursa Major, Centaurus, and Sagittarius. Miss Annie J. Cannon also contributes some valuable notes in these circulars on Variable Stars of Long Period, from her observations with the six-inch telescope.

The adoption of photographic processes for measuring light, locating the heavenly bodies, analyzing their movements, etc., has extended the bounds of human knowledge beyond the wildest dreams of fancy. We do not claim too much when we say that photography has unquestionably revolutionized the science of astronomy even in our day.

In accordance with our announcement in the last issue we present our readers with a new and improved PHOTO ERA in the present number. We trust they will be pleased with its new attire. We consider it more artistic and in better keeping with the modern and progressive ideas of high-class book-making than any previous issue of the magazine has shown.

"Beautiful forms and compositions," says Ruskin, "are not made by chance, nor can they ever, in any material, be made at small expense. A composition for cheapness and not for excellence of workmanship, is the most frequent and certain cause of the rapid decay and entire destruction of arts and manufactures." We aim to create the best magazine of its kind published, as illustrating progress in the art of photography. We have good reason to believe that the PHOTO ERA is exerting to-day the strongest possible influence in the American photographic world toward maintaining a high standard in the development of photography along artistic and educational lines. Its consistent policy has always been to encourage all manifestations of art in photography among its readers without encroaching on individual freedom of expression in any way. In technique, "our course has always laid between the Scylla of microscopic sharpness and the Charybdis of 'fuzzy type' that borders on smudge." We know that we have succeeded, from the numerous expressions of good will and opinions that have reached us from those whose judgment in such matters carries the greatest weight. These in their turn have been most liberally supplemented with orders for subscriptions and advertising contracts that have demonstrated beyond the shadow of a doubt that the plan of the magazine meets with popular favor. We hope for a continuance of this confidence on the part of the photographic and artistic public; and in return we promise to worthily represent the cause we stand for, not only by producing the most beautiful but also the most useful photographic magazine in America. We shall continue to furnish new ideas and information on photography and art not to be obtained in any other publication. The new PHOTO ERA will be a unique exponent of the art of picture-making by photography.

We are looking for new ideas and our constant effort is directed to improve the PHOTO ERA, so that it may become more helpful to our readers. We desire to educate them both artistically and technically, and are continually seeking to discover their wishes for the sole purpose of publishing what will be of interest to them. We have many letters from time to time, of criticism and suggestion, but would be pleased if every reader of the PHOTO ERA would give his opinion of it. In order to get the opinions of our readers, we will make the following offer: To the person sending us the best letter answering the following questions and giving the best ideas for the improvement of the magazine, we will give six months' subscription to the PHOTO ERA *édition de luxe*, or a year's subscription to both the PHOTO ERA and the *Practical Photographer*, value, $5.00. For the two next best sets of answers we will give either the PHOTO ERA or the *Practical Photographer* for a year, value, $2.50: —

1. What kind of articles do you like best?
2. What kind of articles do you like least?
3. What do you think is the best article in the last three numbers?
4. What article in the last three numbers did you like least?
5. Which department do you find most interesting and useful, and which, if any, would you suggest discontinuing?

6. Name five pictures in the last two or three numbers which you consider wholly satisfactory, and five that you do not care for, telling why, if possible.

7. What changes, if any, would you suggest in the arrangement of the magazine?

8. What suggestion can you make for the improvement of the magazine, either by addition, suppression, or change of any part of its plan or execution?

Answers must be forwarded, addressed "Hints Competition," to this office before Aug. 15, 1904. The prizes will be awarded as soon as possible thereafter, and the decision of the editors shall be final.

During the month of June an event of more than usual importance has transpired in the American photographic world. It is officially announced that "all the work of American photographers destined for the London Photographic Salon, 1904, must be submitted to a Selection Committee sitting in New York and composed exclusively of American members of the Linked Ring."

"The pictures approved by the American Selection Committee will be accepted for hanging without passing the London jury."

We recognize that there are many good names among the members of the Linked Ring on both sides of the Atlantic. And we trust that they have acted wisely in thus surrendering their highest prerogative, the right of selection of American pictures for the Salon of 1904. But we cannot help feeling that their prestige with the photographic world at large must be seriously affected thereby. As an international jury sitting in London, they were presumably removed from the local interests and prejudices, and their decision commanded the respect of the universal world. In delegating this right to their American representatives they have deliberately discriminated against the American photographer and have destroyed the confidence of the American public, at least in the international character of their tribunal and the representative character of the London Salon as fixing artistic standards in photography.

The American Links, with a few exceptions, are members of the so-called Photo Secession, — the politicians of the American photographic world, — with scores to settle and debts to pay, and they would be more than human not to improve this golden opportunity. We have combated their pretensions because we believe that, consciously or unconsciously, their sole aim is apparently the glorification of the individual, not the advancement of art and photography. Individually and collectively they refuse to submit their work to any jury not of their own selection, and they refuse to exhibit in any photographic show where their works are not hung as a whole. We think that they have no right to set themselves above the law by refusing to be judged on the same grounds as other photographers.

Moreover, their purpose, according to their published statements, is "to compel its [photography's] recognition not as a handmaiden of art, but as a distinctive medium of individual expression."

We cannot understand why there should be any organized effort to compel people to do what most of them are ready and willing to do without compulsion. It is a kind of dogmatism that the American photographic world will not stand for. In art there is nothing so fatal as dogma. It paralyzes effort, weakens initiative, and destroys originality. And so we regret to record the fact that the charm and distinction of the London Salon award is lost by this egregious blunder of the Linked Ring, Pope Steiglitz the First and his college of American photographic cardinals to the contrary notwithstanding.

The Round Robin Guild

Specially designed for the Amateur Photographer and the Beginner

Conducted by Elizabeth Flint Wade

(Any amateur photographer may belong by sending in his name and address)

July is here and we bid it a hearty welcome, for it

" Brings us the airs of hills and forests,
The sweet aroma of birch and pine,
Gives us a waft of the northwood, laden
With sweet-brier odors and breath of kine;
Brings us the purple of mountain sunsets,
Shadows of clouds that rake the hills,
The green repose of the fragrant meadows,
The gleam and ripple of brooks and rills."

Best of all it brings us the vacation days, the days when we lay up joyous memories, — pictorial memories, too, if we go to and fro on our journeyings with a camera for a companion.

Each month has its own special subject which may be better photographed during that month than at any other time of year. July is a good month to make photographic studies of trees, for there are often windless days when the tree is in almost perfect repose, and a picture of a tree made with short time exposure gives better detail in the shadows than one made when the wind is blowing and a snap-shot is taken. Under the former conditions the picture of a tree has a roundness and form which it is not easy to obtain with an instantaneous exposure. The shadows are so very dense that it is hard to get detail, and one's instantaneous pictures of trees are often mere silhouettes. A cloudy day in July when the wind is still is an admirable one for photographing trees.

The subject of the prize competition for July is a tree, and we hope to receive some fine pictures. The prizes are well worth trying for; and when one realizes that the only condition for competing is that one must be a member of the Guild, it is readily seen that all one receives is clear gain. Besides the possible winning of a valuable prize, the effort to win it helps one on his photographic way; and though the effort may not be a successful one, you know the philosopher says that the "Keep-a-tryin' signboards mark the highway of success."

THE CLOUDS

Several mechanical devices have been invented for the purpose of catching clouds. These were attached to the lens, their object being to equalize the exposure, by giving an instantaneous to the sky and a time exposure to the landscape part of the picture. They were never a great success and have been superseded by the ray-filter, — a glass cell composed of two pieces of optical glass set in a brass ring, and the space between the glasses filled with a solution of bichromate of potash. The ring slips over the lens tube, bringing the filter in front of the lens. The liquid restrains the action of the blue and violet rays which most quickly affect the sensitive plate, and a picture of a landscape made through this filter shows the clouds in all their delicate gradations of lights and shadows.

One way in which clouds may always be secured in a print is to make two negatives, exposing one for the sky and one for the landscape. The two negatives are developed, one for the clouds and the other for the landscape, and when dry are fastened together at the corners with a bit of Canada balsam. The non-curling films are the best medium for such a process, as the thickness of the glass makes some difference in the printing.

Negatives made simply of clouds should be developed slowly, in order to bring out all the detail in the shadow, using bromide of potassium to hold back the high lights and give the shadows a chance to gain density.

FIRST PRIZE
The Flatiron Building, New York — By Charles Kroeber

In a negative where the clouds are not very much overexposed, but still too much to print equally with the landscape, an ingenious device is to attach a piece of tin to the printing-frame with its edge rolled back in a curve. Place the frame in the light so that the landscape portion is shaded by the tin while the clouds are exposed to the full light. This way of equalizing the printing, however, is only possible when the horizon line is almost straight.

SECOND PRIZE
Tremont Street, Boston — By Morris Wasserman

TIMING EXPOSURES

The knowledge of just how long to expose a plate becomes, in time, almost accurate, for the eye soon learns to measure the actinic quality of the light. The experienced amateur, knowing the speed of his plate, the quickness of the lens, the size of stops used, and noting the brilliancy of the image on the ground glass, intuitively determines the time of exposure.

There are on the market instruments for measuring the correct time of exposure under different conditions of light, and the calculations made for the speed of the plate and the size of the stop in use. These little instruments, known as actinometers, actinographs, exposure meters, etc., indicate and record the actinic effect of light on the sensitive plate. They are very ingenious, but comparatively simple. Each contains two strips of paper, one of which is called the standard tint and is used under ordinary conditions of light; and the other is of lighter tint and is used for interiors where the light is dull and weak.

To use the instrument, the camera is first adjusted and the plate in readiness for exposure. A turn is given to a small wheel in the exposure meter, bringing a strip of sensitive paper parallel with the standard tint. Note is made of the length of time it takes the sensitive paper to assume the color of the standard tint, and the time is the basis of the calculation for the length of time required for a correct exposure. Tables giving the sensitiveness of the different makes of plates are furnished with each meter. To find the time of exposure, the pointer of the instrument is turned until the record of the time taken to color the sensitive paper is opposite the number of the plate. The time which is set opposite the size of stop is the length of time the plate should be exposed. In turning the scale to the plate number, it turns the diaphragm to the exact time exposure.

While an exposure meter is very desirable for some times and occasions, it is wiser to learn to estimate the time of exposure than to depend on an exposure meter. This knowledge is easily acquired if one cultivates the habit of observation, and studies causes and effects as exemplified in making negatives.

Until one becomes adept in photography it is wiser to confine oneself to the same speed plate for out-of-door work. There is great latitude in the exposure of even the quickest plate. The same speed of plate which under certain conditions requires the shortest exposure possible, in others will bear an exposure of hours. Clouds, snow scenes, and marines require scarcely an instant's exposure to impress themselves on the plate, while in a dimly lighted interior the plate might be exposed for hours without danger of overexposure.

The best guide for the exposure of the plate is the brilliancy of the image on the ground glass. Strongly lighted scenes are very distinct, while a dim light makes it hard to distinguish the objects. Between these two extremes there is a great difference, and by carefully noting the clearness or dimness of the image on the ground glass one will soon learn to determine the correct time of exposure without resorting to an exposure meter.

There are four special points that govern the exposure of a plate: First, the sensitive quality of the plate used; second, the size of the stop before the lens; third, the actinic power of the light at the time of exposure; and fourth, the character of the subject to be photographed. Some plates are so very sensitive that the exposure must be made in the fraction of a second; while others, sensitized with a slower emulsion, may be exposed a number of seconds on the same subject and with the same lighting.

SPEED OF PLATES

The sensitiveness of plates is now of great uniformity; and when the speed of a plate has been once ascertained, then when using this brand one knows the time of exposure. A table of the comparative sensitiveness of plates has been prepared which our members may find useful in selecting the kind of plate suited for special subjects. The rate of speed is arranged alphabetically, beginning with the most sensitive makes: —

A. Cramer Crown; Cramer Instantaneous Isochromatic; Eastman Red Label and Eastman Film; Hammer Special; Seed Gilt Edge 27; Stanley No. 50.

B. Carbutt Eclipse; Cramer Banner; Hammer Extra Fast; Seed No. 27x; Stanley Imperial Portrait; Standard.

C. Carbutt Orthochromatic No. 27; Hammer Fast; Seed No. 26.

D. Carbutt Orthochromatic No. 23; Cramer Anchor; Hammer Slow; Seed No. 23.

E. Carbutt B. No. 16; Cramer Slow Isochromatic; Hammer Orthchromatic.

F. Non-halation Plates.

This list comprises a few of the plates on the market, and the amateur may add to it the special make which he uses, placing it in its proper class.

The time of exposure doubles with each succeeding class. If a plate in A requires a half a second exposure for a certain subject, then if one from class B is chosen, the time of exposure must be doubled, and so on down the line.

The quick plates are specially good where one does not wish great contrast. They have what is called mellow qualities, and give a clear, quick-printing negative. These plates are the choice for hand camera work and for groups indoors.

Those in class B, while slower plates, are more desirable for portrait work. While very rapid, they have much latitude of exposure without danger of fogging.

The slower brands of plates are the choice for copying and for commercial work, as they have greater density and give more contrast.

The Non-halation plates are the choice for photographing interiors where windows are included in the angle of the lens, for night photography where electric lights or gaslights appear, and are desirable in landscape work where there are strong contrasts of light and shade. They are slow in action, and the exposure must be more than twice as long as for the ordinary sensitive plate.

The isochromatic and orthochromatic plates are used where it is desired to render true color values. The slow isochromatic is one of the best plates for commercial work, as it brings out the grain of wood or the design of the fabric and gives the true color value of the object photographed. It is also the best plate to use for copying paintings.

Another make of plates is called the contrast plate, and is used for copying drawings, engravings, photographs, writing, etc., where it is necessary to have contrast. These subjects copied by the ordinary plate are apt to be flat, but when the contrast plate is used, the result is almost equal to the original.

Plates of great speed are rich in silver, and in developing care must be taken not to use too much of the active developing agent in proportion to the alkali. The addition of bromide of potassium to the developer will in most cases be necessary.

Flatness or want of high lights in a negative is usually due to overtiming. The more rapid the plate, the less latitude of time for exposure. Too much sal soda also produces flatness, also a developer weak in the active developing agent.

BROMIDE PRINTING

Do you wish to know all about the printing of bromide papers? Then get the May number of the *Practical Photographer*. With this for a guide even the novice may make successful bromide prints.

PASSE-PARTOUTS

A member of the Guild sends the following hints on making a passe-partout from spoiled negatives: —

"Wash off the film, using warm water and soap. Clean the glass with a little French chalk. Cut a piece of paper the size of the picture intended to be mounted and paste it in the middle of the glass. Paint the clear edges of the glass with black paint, and when dry soak off the piece of paper and place the print in position, fastening it at the corners with a bit of paste." Our correspondent suggests using another negative for the backing, but it is just as well to use a piece of pasteboard and save the glass for another print. The print and the backing are bound together with passe-partout binding, which comes already gummed for use, as does the hanger by which the picture is suspended.

THIRD PRIZE
"Through Fog and Rain" By H. W. Schoenewolf

The awards for the April Competition closing May 31st, (subject, "A Rainy Day"), are as follows: 1st prize, The Flatiron Building, by Charles Kroeber; 2nd prize, Tremont Street, Boston, by Morris Wasserman; 3rd prize, "Through Fog and Rain," by H. W. Schoenewolf; 4th prize, Harold A. Ray. As the pictures show, the work is of a high order of excellence and reflects much credit on the members of the Guild.

ROUND ROBIN GUILD PHOTOGRAPHIC COMPETITION

Subject for the July competition, closing Aug. 31, "Trees."

The competitor may send a picture of a single tree or of a group of three or four trees, but pictures of forests are not wanted.

First prize: A yearly subscription to the PHOTO ERA, *édition de luxe*, value $10.00.

Second prize: Five dollars in cash.

Third prize: Two dollars and a half in cash, or the choice of a yearly subscription to the PHOTO ERA or the *Practical Photographer*, American Library Series.

Fourth prize: One copy of the *édition de luxe*, $1.00.

Any questions in regard to the competition may be addressed to the editor of the department, who will reply by return mail if stamps are enclosed.

See April number for rules of the competition.

ANSWERS TO CORRESPONDENTS

Lucius P. Brown. — Directions for organizing and conducting a camera club may be found in the PHOTO ERA for January, 1903, in the Round Robin Guild department. An article on the subject will also be found in the PHOTO ERA for November, 1899.

B. H. G. — If the potassium of bromide does not act satisfactorily as a restrainer, try combining it with iodide of potassium in the following proportions: Potassium bromide, 100 grains; potassium iodide, 30 grains; water, 4 ounces. Use this in place of the plain potassium bromide solution, and the result will be negatives with much softer contrasts.

Carl F. F. — In photographing silverware for commercial purposes use a non-halation plate and you will avoid the sharp high lights which you find so objectionable.

Katherine L. — Am glad you were so successful with the formula for blue transparencies. To remove the yellow stains from your negative, soak for a while in a weak solution of perchloride of iron. Wash well and dry.

Eleanor B. — A gramme is equal to 15½ grains. If your formula calls for grammes, multiply the number of grammes by the number of grains in a gramme, and the result will be in grains, which may be reduced to ounces. An ounce contains 28 35-100 grammes.

Ben H. — A clearing solution for a fogged negative is made of chrome alum, ⅛ ounce; citric acid, ¼ ounce; water, 18 ounces (fluid). If in developing the negative shows traces of fog, place in this solution before fixing, letting it remain for five minutes, then fix as usual.

Agnes P. Harp and Others. — The new circulars of the Round Robin and the Historic Picture Guild will be ready for mailing soon, and will be sent you as soon as they come from the printer.

PHOTOGRAPHIC EXHIBITIONS AND COMPETITIONS

SOCIETY OR TITLE	DATE	ENTRIES CLOSE	INQUIRE OF
Salon de l'Exposition, Arras	May 1–Oct. 4	Apr. 5	Comité de l'Exposition, Arras, France.
Louisiana Purchase Exposition	May–Nov.	Apr. 1	John A. Ockerson, Chief, Dept. Liberal Arts, St. Louis.
First International Salon in The Hague	June 12–July 24	June 1	Sekretariat Haag, Conradkade 63, The Hague, Netherlands.
Wiener Photographische Gesellschaft	July 14	May 1	W. P. G., Karmelitergasse 7, Vienna, Austria.
Twelfth London Salon	Sept. 16–Nov. 5	July 10	Alfred Stieglitz, care of G. F. Of, 3 E. 28th St., New York City.
International Photographic Exposition, Berlin	Oct. 1–30	Sept. 1–20	Herr Franz Goerike, Berlin, W. 62, Maassenstr. 32, Germany.
" Lantern-slide Competition	Oct. 15	Oct. 15	M. M. Vanderkindere, Palais du Midi, Brussels, Belgium.
" Stereogram Competition	Oct. 15	Oct. 15	" " " "
Hove Camera Club	Nov. 23–26	.....	A. R. Sargeant, 55, the Drive, Hove, Eng.
Southsea Photographic Society	Dec. 2–8	.....	F. J. Lawton, 20 Clarence St , Gosport, Eng.
Southampton Camera Club	Dec. 13–20	.....	S. G. Kimber, Oakdene, Highfield, Southampton, Eng.
First American Photographic Salon, New York	Dec. 1904	.....	S. C. Bullenkamp, 102 West 101st St., New York.
Third International Salon, Marseilles	Jan.–Feb., 1905	.....	M. E. Astier, 11, rue de la Grande Armée, Marseilles, France.
Northern Photographic Exhibition	June–July, 1905	.....	F. G. Issott, 62 Compton Road, Harehills, Leeds, Eng.

GIVER	CLOSES	PRIZES
Burr McIntosh Monthly, New York (Beautiful Woman)	Aug. 1	$200.
Youth's Companion, Boston	Oct. 31	$430 in (10 prizes.)
PHOTO ERA, Boston	Nov. 1	$100 in 20 prizes.
The Graphic, London	Nov. 1	£20, £15, £10, £5, etc.
The Photographer, New York	Monthly	$15, $10.
Burr McIntosh Monthly, New York (Outdoor Photographs)	Monthly	$15, $10, $5.
" " " " " (Freak Pictures)	Monthly	$10, $5.
Photogram, Arundel St., Strand, London	Monthly	One guinea and half guinea.
The American Boy, Detroit	Monthly	$2, $1.
National Sportsman, Boston	Monthly	$5, $3, $1, $1.
Browning's Magazine, Boston	Monthly	$5, $3, $2.
The Book-Lover, New York	Monthly	$5, $3, $2, $1.
American Amateur Photographer	Monthly	$5.
Western Camera Notes, Minneapolis	Monthly	$5, $3, $2 in goods.
Leslie's Weekly, New York	Weekly	$10, $5, $1.
Buffalo Express	"	$5 to $25.
New York Evening Mail	"	$5.
Commercial Advertiser, New York	"	$3, $3, $2, $1.
St. Louis Star	"	$5.
Seattle Post Intelligencer (Western Scenes)	"	$2.50, $1.50.

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